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ABSTRACT

Studies on the problems of vandalism and violence in the schools have focused on societal changes, school behaviors, and the attitudes and behavior of the school principal in their efforts to understand the causes of such problems. This study examined recent trends in rates and costs of vandalism, and in rates of assaults by students on other students and on staff in 61 secondary schools in eight different school districts in Los Angeles County, California. Demographic differences were also investigated. Data on vandalism and assaults had been gathered each school month by school districts. Each school had a minimum of 3 years of monthly statistics available on vandalism occurrences and assaults. The results revealed that the variability in vandalism and violence from month to month was much greater than the change over time. No dramatic steady increases or decreases were found. Junior high schools had much lower frequencies of vandalism occurrences and costs than did senior high schools. Vandalism frequencies were higher in schools with a majority of white students, while assault rates were higher in schools with a majority of blacks or Hispanics. Low socioeconomic-level schools had very little reported vandalism but very high assault levels. (NB)

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# TRENDS AND COMPARISONS IN SECONDARY SCHOOL VANDALISM AND ASSAULT

by

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## INTRODUCTION

The problems of vandalism and violence continue to have major negative effects upon our nations schools. A 1978 study conducted by the National Institute for Education noted that approximately $41,670,000 of vandalism damage occurred in United States schools EACH MONTH of the 1977/78 school year. Within the schools of Los Angeles County (which excludes the Los Angeles City School District), there was $7.5 million in property damage in secondary schools during the 1980/1 school year. The amount spent on increased security and for repair and replacement of property has often exceeded the amount spent on textbooks (Fairly & Roundtree, 1979). Fairly and Roundtree (1979) have also noted that there were 258,000 criminal offences reported in U.S. schools between September, 1974, and February, 1975. The Teacher Opinion Poll of 1980 cited 110,000 attacks upon teachers in the 1979-1980 school year.

These problems have been studied from three basic perspectives. One group of studies was oriented toward societal changes as the roots for increased vandalism and violence. These changes included increased societal permissiveness (Kazalunas, 1979), a spreading antipathy to authority (Tygart, 1980), and the inability of schools to rid themselves of undesireable students (Doyle, 1978; Rubel, 1979). This research suggests that vandalism has been and will continue to increase.

A second group of researchers has focused upon school behaviors. "Rejecting behaviors" made by teachers and the overstressing of academics have been suggested (Feldhausen, 1979; Majoribanks, 1980; Serow & Solomon, 1979), as well as the rigidity

of the age-grade structure and the misuse of punishment (Ianni & Reuss-Ianni, 1980; Maver & Butterworth, 1979). These researchers suggest that reductions in behaviors could be linked with awareness of behaviors.

The third approach centered upon the attitudes and behaviors of the school principal. Researchers have noted that the principal established the atmosphere of the school (Gallesich, 1973; Reynolds, 1977; Serow & Solomon, 1979), just as business leaders establish climates of excellence in successful corporations (Peters & Waterman, 1982). Weeks (1976) found that lower rates of vandalism occurred in schools with principals seen as capable and consistent. New principals are seen as initiators of change (Tye, 1970), as setting the pace for change (Heichbever, 1975), and able to change teacher behaviors (Montegar, Reid, Madsen & Ewell, 1977; Wiles & Lovell, 1975). This research suggests that changes in rates of vandalism and violence might accompany changes in the attitudes or behaviors of principals or changes in the principalship itself.

The three approaches cited have suffered from a common lack of quality information concerning vandalism trends and rates. The studies have almost exclusively utilized a treatment-posttest methodology. Studies select a school or small set of schools with "high" incidences of vandalism. The definition of "high" tends to be convenient and is usually anecdotal. Use of this sample and methodology leads to problems with regression towards the mean, as well as potential "Hawthorne effects" (change related to attention rather than a particular treatment). One shot treatmtents also do not consider the longevity of effects.

## METHOD

This phase of the study was designed to describe recent trends in rates and costs of vandalism, and in rates of assaults by students on other students and on staff in a variety of secondary schools in Los Angeles County, California. Demographic differences were also investigated. Data had been gathered each school month by school districts on vandalism and assault for reports sent to the Los Angeles County Superintendent of Schools.

The sample consisted of 61 secondary schools from eight different districts. Each school had a minimum of three years of monthly statistics available on vandalism occurrences and assault. Thirty of the schools also had at least three years of data on replacement and repair costs. A subset of 18 schools had seven years of data available.

These schools were of five grade level types and of three ethnic compositions. They were also able to be divided into three socioeconomic levels. Demographic data was also collected.

### Analyses

Three separate analyses were performed in this initial phase. First, the Box-Jenkins program of SPSS-X was used to plot the trends in the four variables for each individual school and for various aggregations of schools. Five-month moving averages were also computed for the aggregations.

Second, the total number of vandalism occurrences, total costs, total number of assaults on students, and total assaults on staff was computed for each school. Analysis of variance was used to determine whether differences between various types of schools were significant.

## Results

### Trend Plots for Various Groupings

Results reported in this paper are a subset of the total study. The first figures (Figures 2a through 2h) display the total number of occurrences, total dollar costs, and total number of assaults on students and on staff were computed for each month and the five-month moving averages of these totals. Data on vandalism occurrences, assaults on students, and assaults on staff were available for three years for all 51 schools, while data for vandalism costs were available for 40 schools for the three year period. These dollar amounts have not been adjusted for inflation.

As can be seen, the variability from month to month is much greater than the change over time. A second notable fact is that there are no dramatic or steady increases, and no dramatic or steady decreases. The moving averages suggest that different things are happening with each variable.

The next sets of figures (Figures 3d through 5f) display examples of the trends in the dependent variables for three groupings of the data: junior high schools versus senior high schools, three ethnic categories (white, black and Hispanic majority schools), and three socioeconomic categories (low, medium, and high). Because of differing sample sizes, the number of incidents and dollar costs are reported monthly per school.

The first three Figures display the moving averages for vandalism. Junior highs have much lower frequencies of vandalism occurrences and costs than do senior highs. However, the seven-year figures from a limited subset (N=18), suggest that

junior high rates might be rising to equal those of senior highs. Figures 3g through 3l present the moving averages for assaults. More variability can be noted. Junior high frequencies are below those of senior highs, but once again the trend seems to be bringing the rates together.

The next set of Figures (4d through 4f) display some of the data for schools differentiated by ethnic majority composition. These figures illustrate the interesting finding that vandalism frequencies were higher in school with a majority of white students, while assault rates were higher in black and Hispanic-majority schools. The same pattern is even more pronounced in the Figures for different socioeconomic levels of schools. Low SES-level schools have very low reported numbers of vandalism occurrences and costs, but very high levels of assault. Figures 4e and 5e have been included both for convenience as well as to illustrate the high monthly volatility in the straight frequency data.

Comparisons

Several factors could be impacting upon the rates at junior and senior highs. While senior highs display higher frequencies than junior highs, they also are much larger and have many more students. In addition, there are three different types of schools (by grade level) considered to be junior highs and two types of senior highs. Likewise, the effects of ethnicity and socioeconomic status are most likely interrelated. Since 10 of 12 black-majority schools were from the same district, differences in district reporting procedures could be a reason for differences by ethnicity. These factors and those of community and district size

were investigated in a series of analyses of variance. The results are reported in Table 5 (for vandalism occurrences) and Table 7 (for assaults on students).

The first thing to note is that the rate per 100 students for both vandalism occurrences and assaults on students are HIGHER in junior highs, although these differences are not large enough to be statistically significant. The breakdown by type reveals that the 7th through 9th grade and 10th through 12th grade schools reported low rates for both vandalism and assault (although 6th through 8th was the lowest for assault). However, there were so few schools of these types and they all were in the same district, that conclusions about the efficacy of placing nineth grades in junior highs cannnot be determined.

The effect of district reporting procedures on ethnic differences was mixed. For vandalism occurrences, the district with most of the black-majority schools had by far the lowest frequencies of all districts (district #8). This difference was highly significant. Differences for assault rates between districts were also highly significant but appeared to stem from the high rates of District 5 and the extremely high rates of district 2, both districts with mixes of white and Hispanic-majority schools. Correlations of socioeconomic level (as measured by percent receiving AFDC) and ethnicity (percent white, black and Hispanic) revealed correlations consistently between .650 and .850 ($p<.001$). Therefore, differences found for ethnicity and SES-level were not independent. Finally, size of district did not seem important, but community size showed significant differences. Once again, these differences were

confounded. since district and community size were highly related (four of the six community sizes were associated with only one district).

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Figure 2a
Total Monthly Occurrences of Vandalism

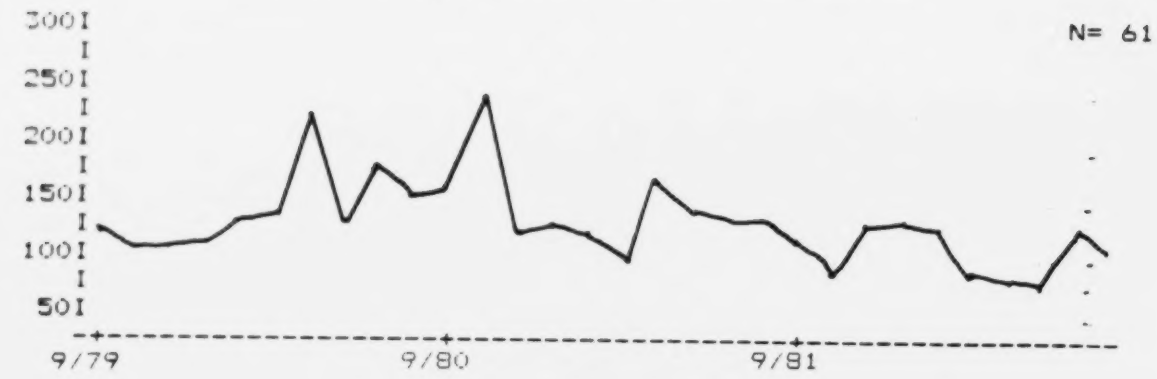


Figure 2b
Total Monthly Vandalism Costs

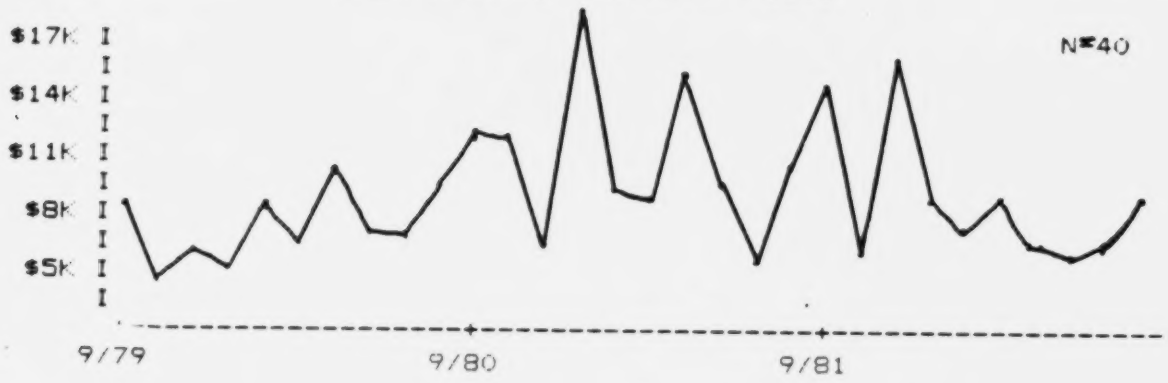


Figure 2c
Total Monthly Assaults on Students

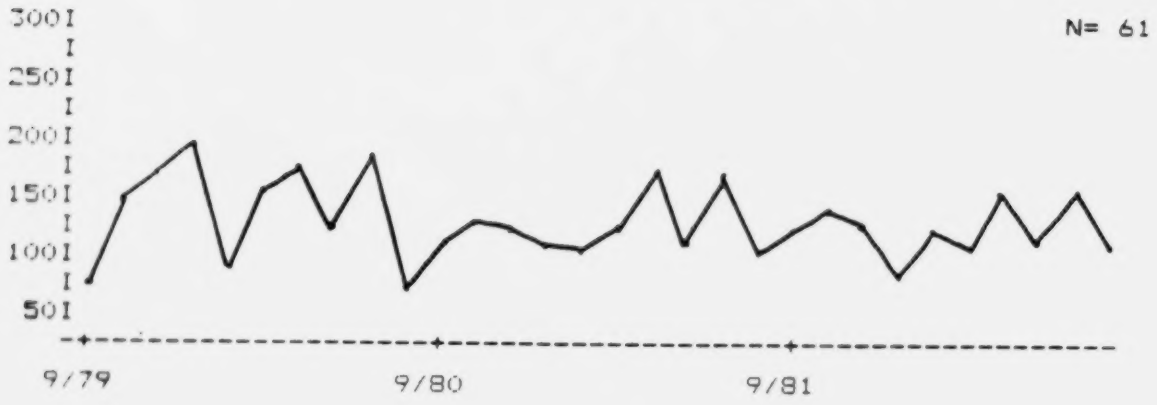

Figure 2d
Moving Averages of Monthly Occurrences of Vandalism

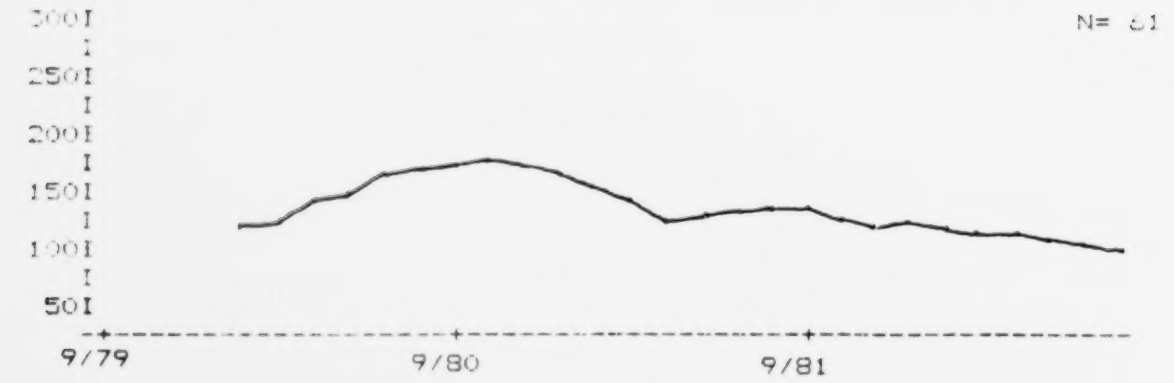


Figure 2e
Moving Averages of Monthly Vandalism Costs

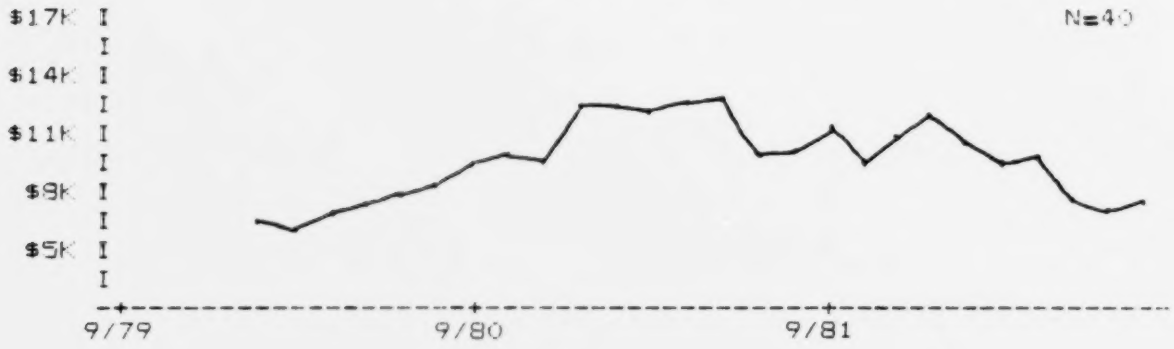


Figure 2f
Moving Averages of Monthly Assaults on Students

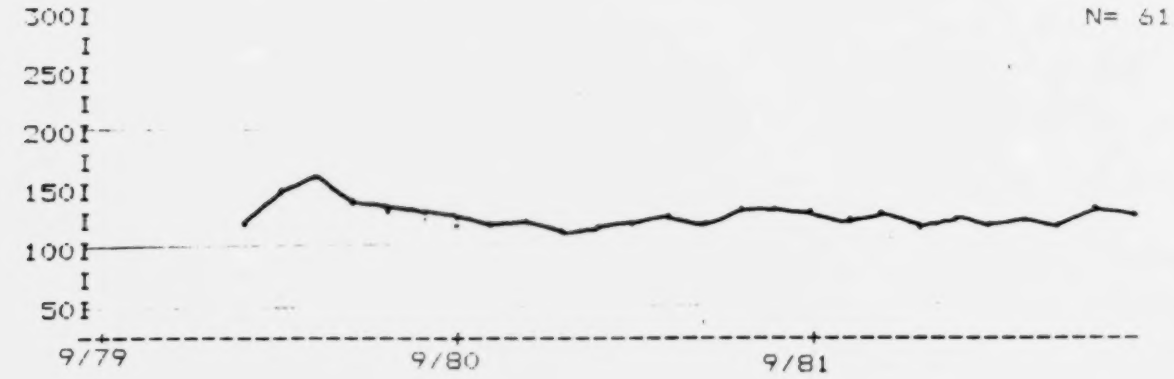

Figure 2g
Total Monthly Assaults on Staff

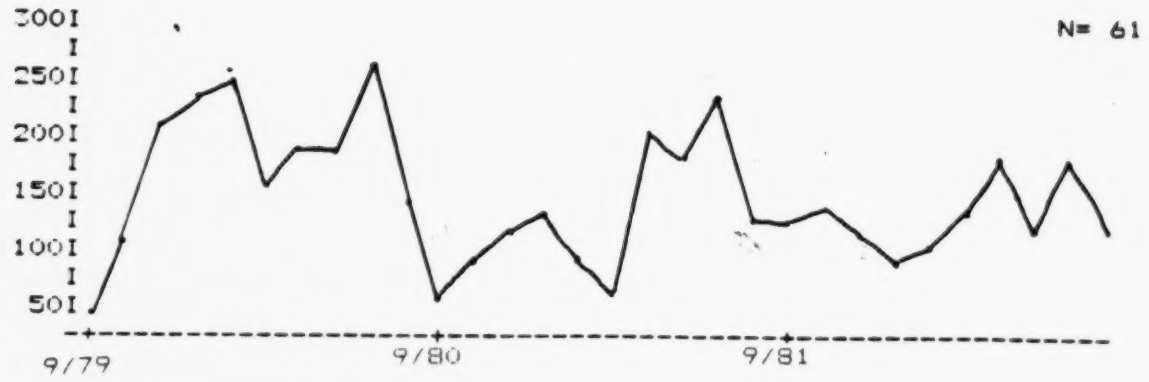


Figure 2h
Moving Averages of Monthly Assaults on Staff

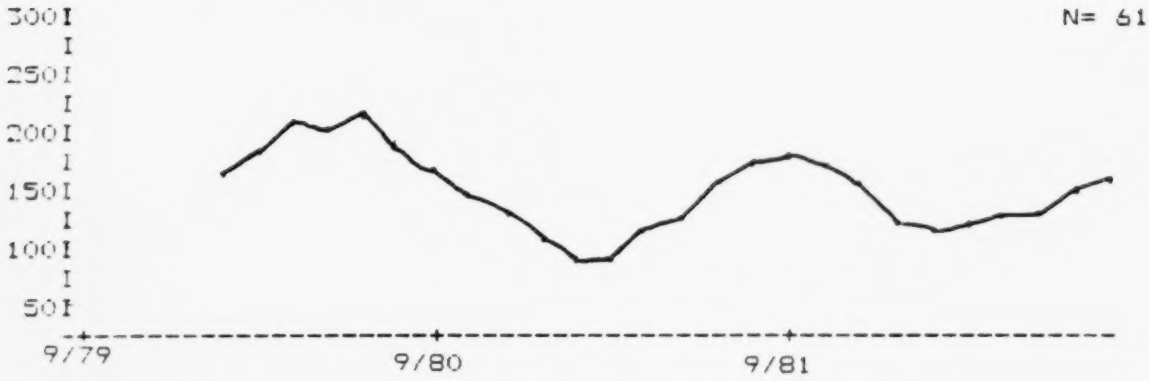

Figure 3d
Moving Averages of Junior/Senior High Vandalism Occurrences

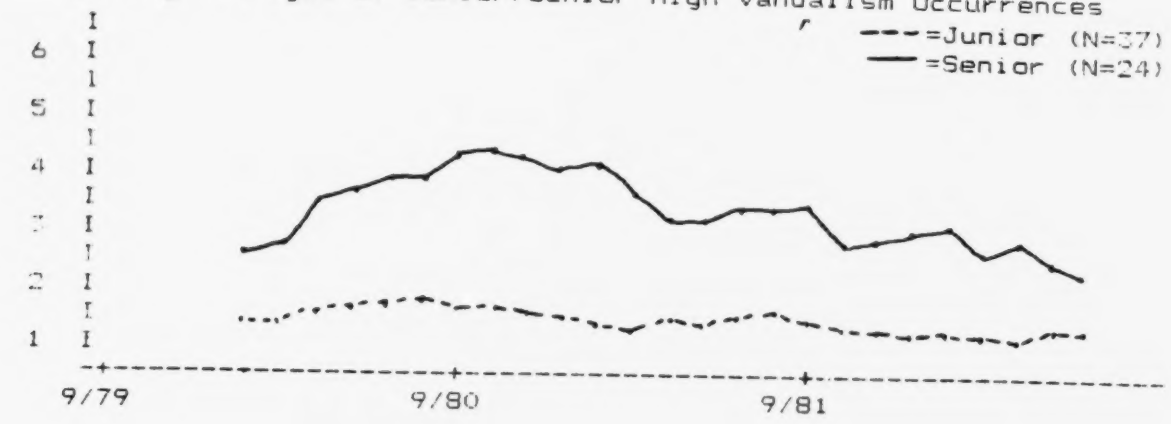


Figure 3e
Moving Averages of Junior/Senior High Vandalism Costs

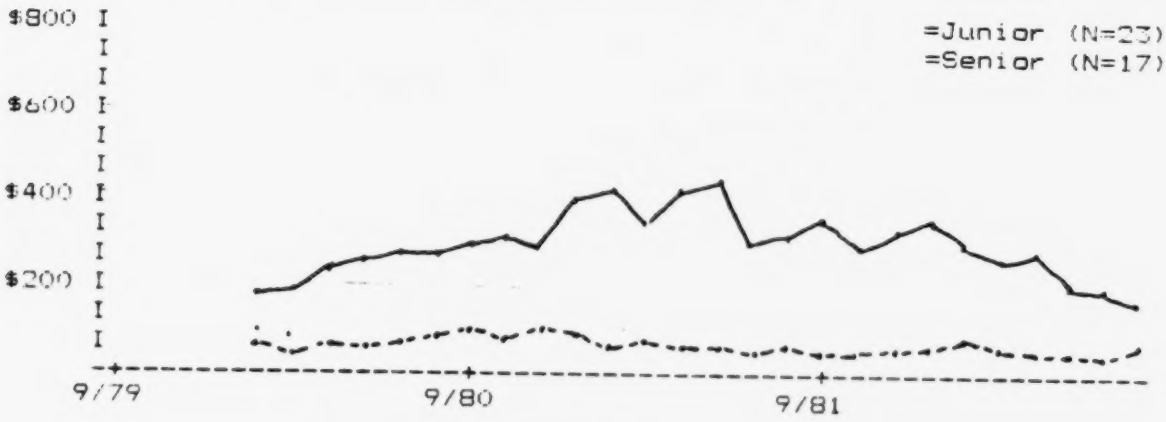


Figure 3f
Moving Averages of Junior/Senior High Vandalism Occurrences
(Seven-year data)

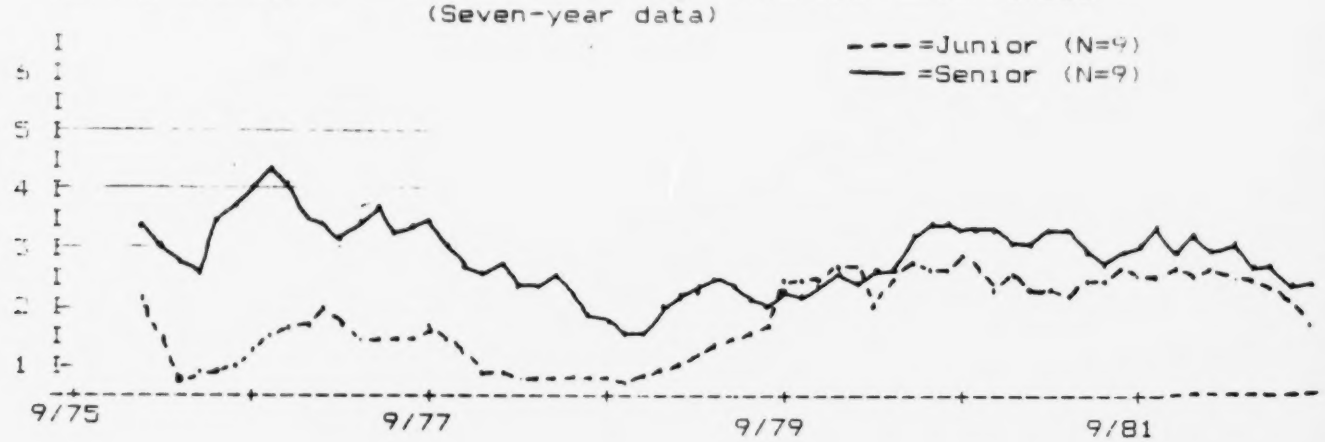

Figure 3j
Moving Averages of Junior/Senior High Assaults on Students

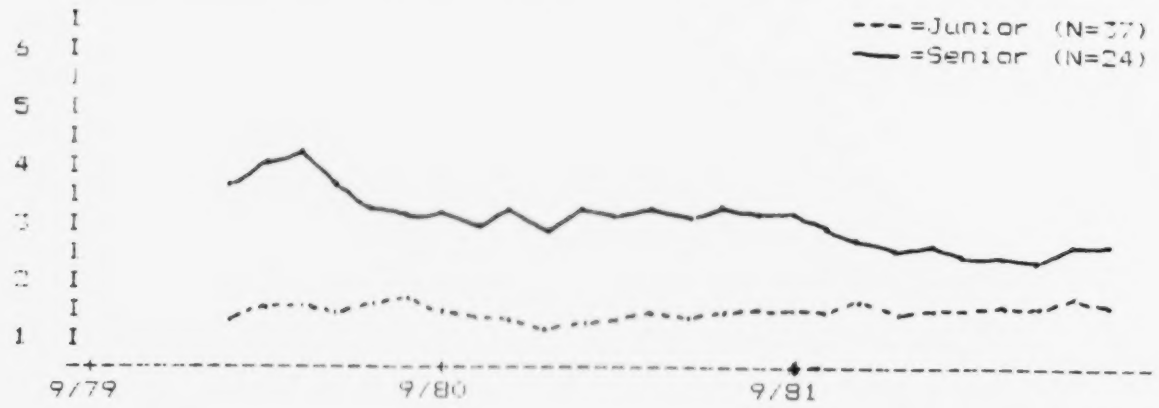


Figure 3k
Moving Averages of Junior/Senior High Assaults on Staff

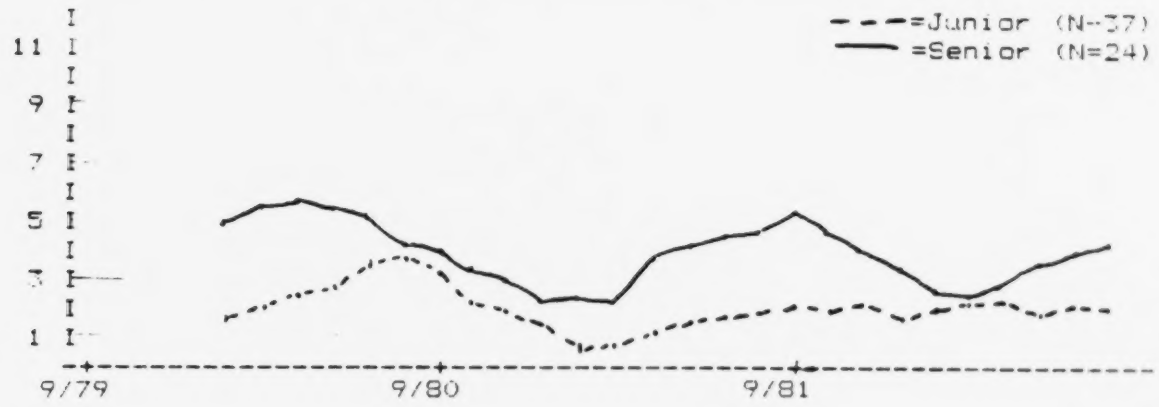


Figure 3l
Moving Averages of Junior/Senior High Assaults on Students
(Seven-year data)

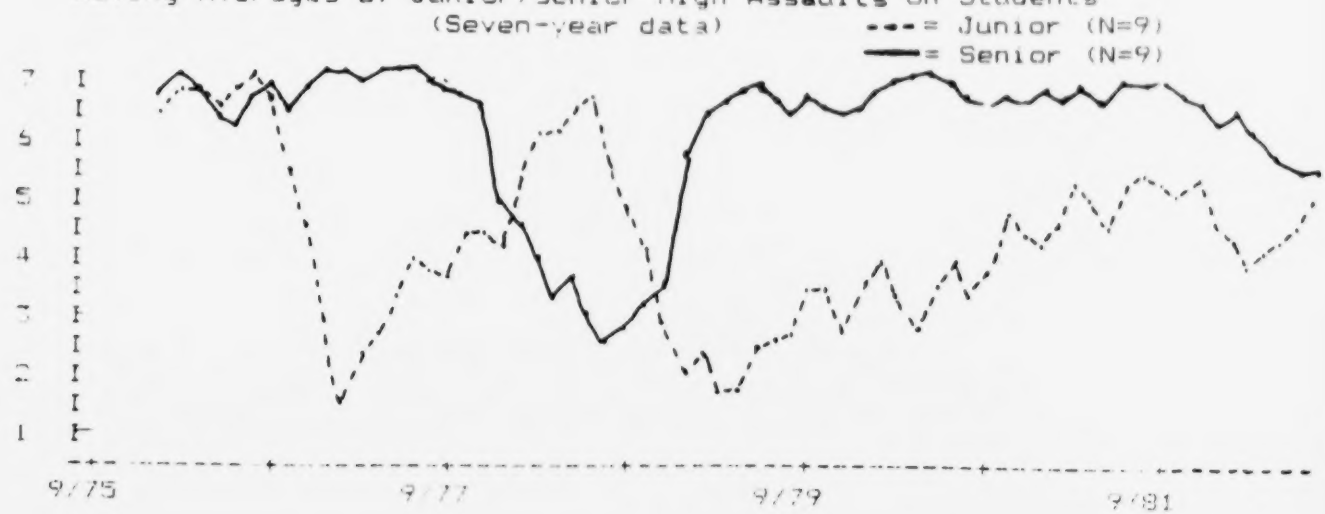

Figure 4d
Moving Averages of Costs by Ethnicity of School

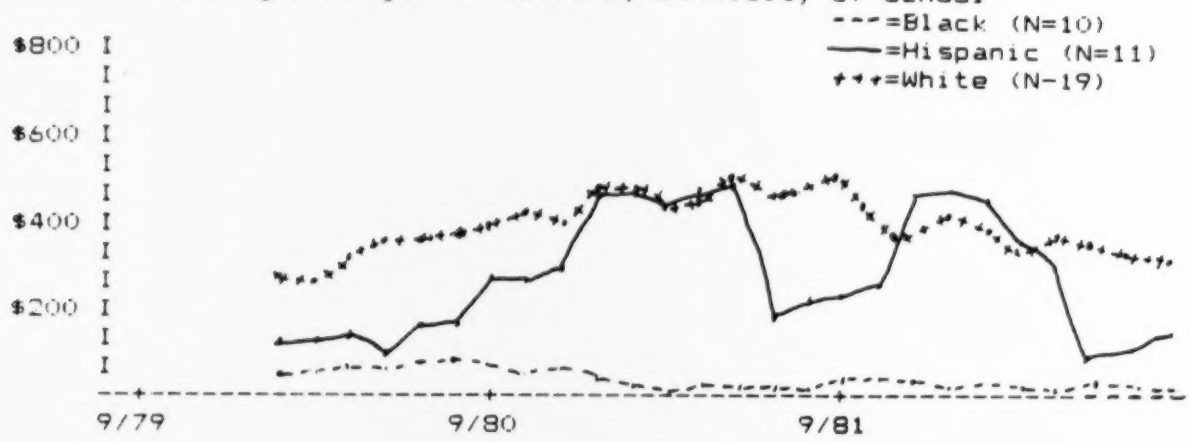


Figure 4e
Mean Monthly Assaults on Students by Ethnicity of School

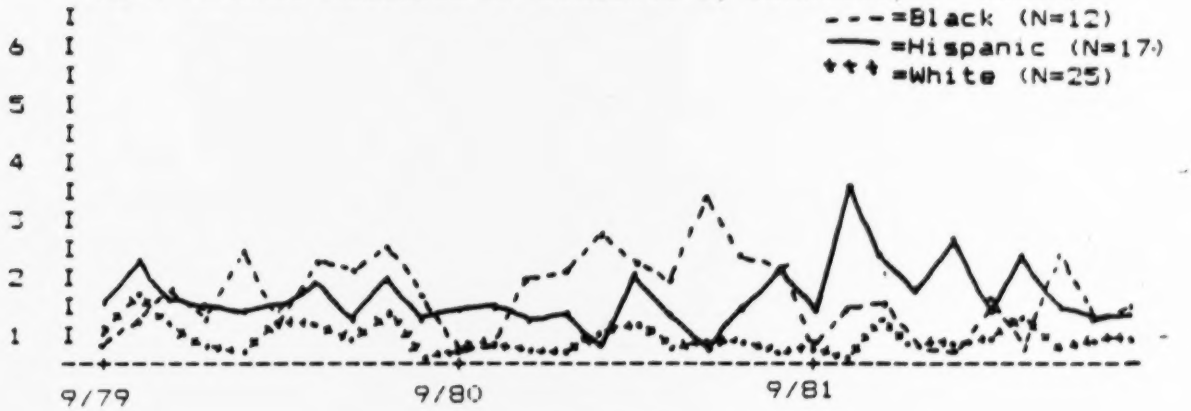


Figure 4f
Moving Averages of Assaults on Students by Ethnicity of School

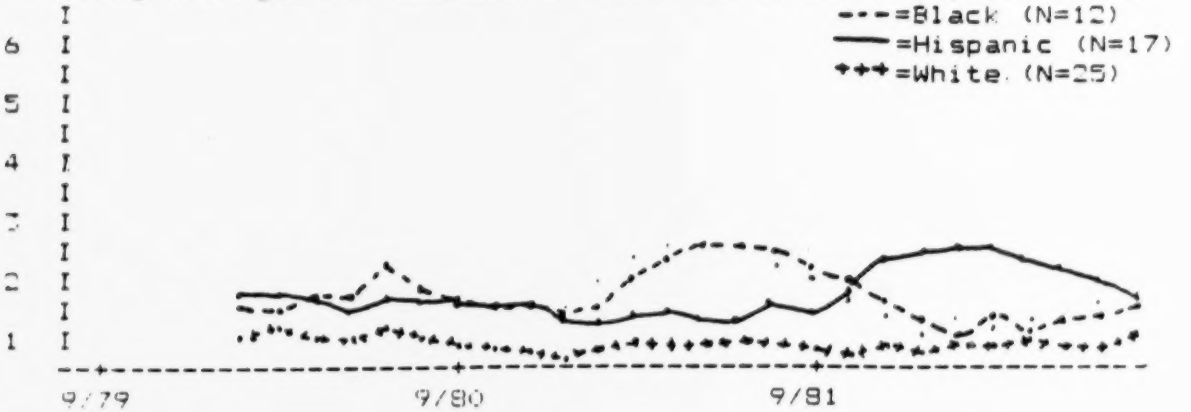

Figure 5d
Moving Averages of Costs by Socioeconomic Status of School

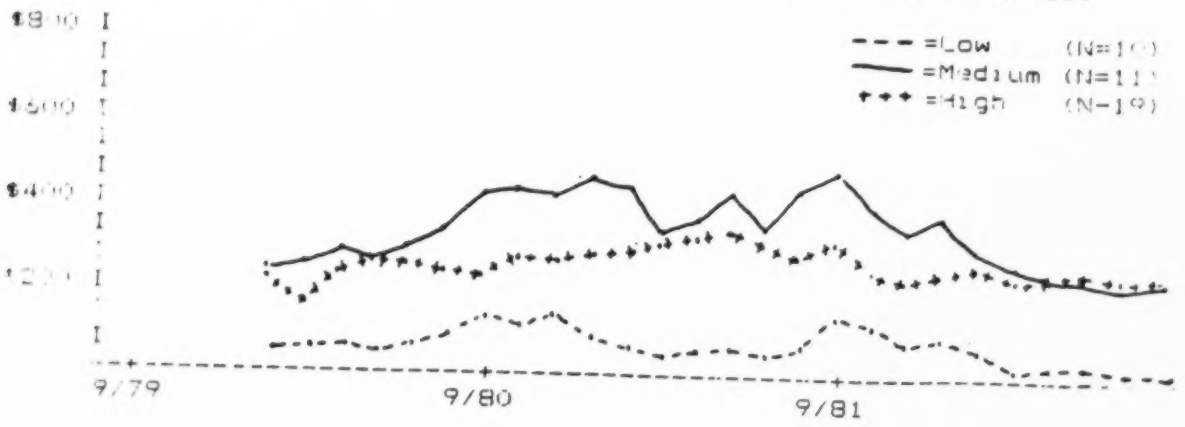


Figure 5e
Mean Monthly Assaults on Students by
Socioeconomic Status of School

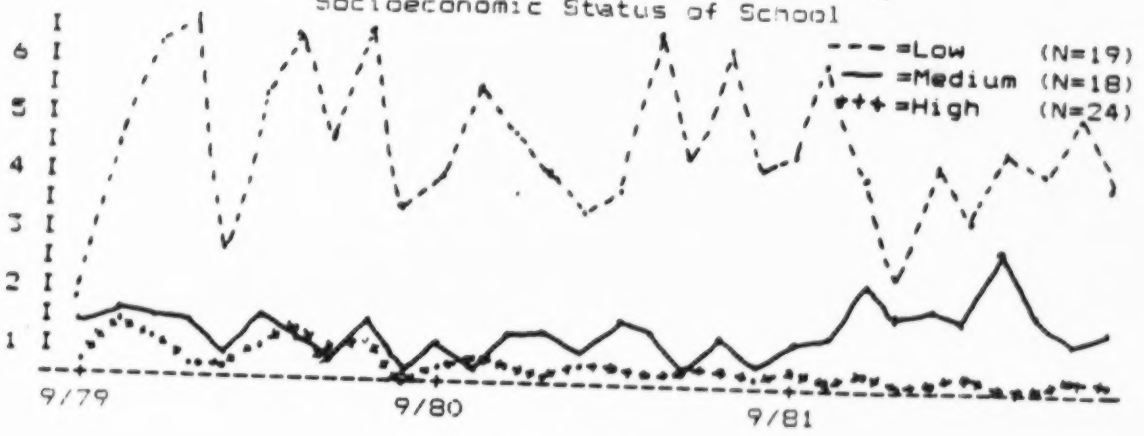


Figure 5f
Moving Averages of Assaults on Students by SES of School

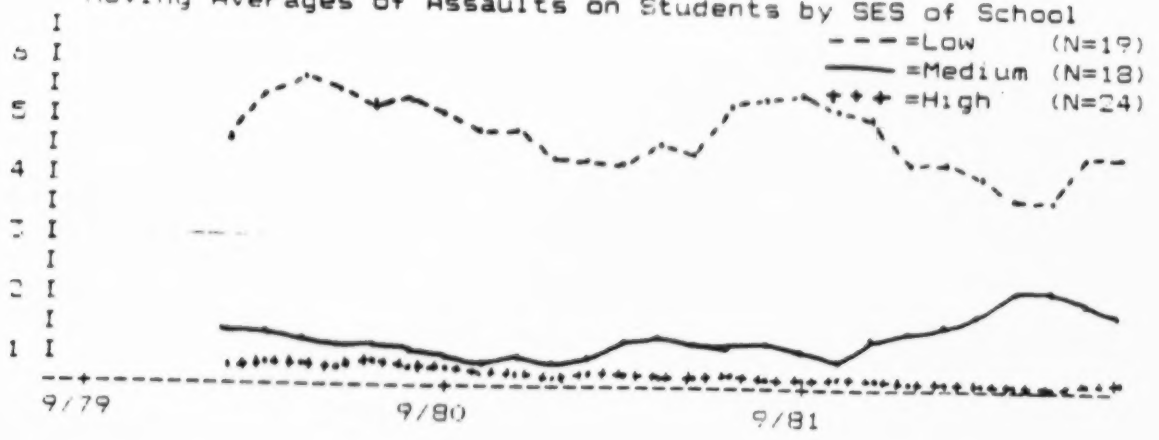

Table 5
Mean Frequencies and Differences
for Three-Year Data on Vandalism Occurrences

| School Type | N | per school Mean | per 100 pupils Mean | SD | Significance of F - ANOVA |
|---|---|---|---|---|---|
| All | 61 | 69.44 | 6.47 | 4.86 | - |
| Junior | 37 | 46.41 | 7.00 | 5.56 | ns |
| Senior | 24 | 104.96 | 5.65 | 3.46 | |
| 6-8 grade | 15 | 63.80 | 9.93 | 4.49 | |
| 7 & 8 grade | 14 | 50.79 | 7.41 | 5.47 | |
| 7-9 grade | 8 | 6.13 | 0.77 | 0.49 | *** |
| 9-12 grade | 21 | 118.81 | 6.39 | 3.04 | |
| 10-12 grade | 3 | 8.00 | 0.49 | 0.26 | |
| Black | 12 | 15.83 | 1.86 | 2.98 | |
| Hispanic | 17 | 67.53 | 6.91 | 5.15 | *** |
| White | 25 | 97.08 | 8.71 | 4.21 | |
| Mixed | 7 | 67.29 | 5.28 | 3.54 | |
| District 1 | 4 | 53.00 | 3.15 | 0.51 | |
| District 2 | 9 | 50.00 | 6.72 | 2.81 | |
| District 3 | 9 | 67.67 | 6.37 | 4.40 | |
| District 4 | 11 | 101.54 | 9.68 | 2.81 | *** |
| District 5 | 5 | 136.20 | 9.49 | 7.12 | |
| District 6 | 6 | 64.33 | 7.93 | 7.11 | |
| District 7 | 6 | 118.00 | 9.15 | 2.65 | |
| District 8 | 11 | 6.64 | 0.70 | 0.44 | |
| Size of District | | | | | |
| <10 schools | 4 | 53.00 | 3.15 | 0.51 | |
| 10-25 schools | 17 | 104.41 | 8.82 | 5.58 | * |
| >25 schools | 40 | 56.23 | 5.80 | 4.42 | |
| Low SES | 37 | 51.73 | 5.25 | 5.29 | |
| Medium SES | 18 | 93.78 | 8.11 | 3.53 | * |
| High SES | 6 | 105.67 | 9.03 | 3.23 | |
| Community Size | | | | | |
| 30,000 people | 5 | 136.20 | 9.49 | 7.12 | |
| 50,000 | 15 | 66.33 | 7.00 | 5.45 | |
| 80,000 | 11 | 6.64 | 0.70 | 0.44 | *** |
| 90,000 | 13 | 50.92 | 5.62 | 2.88 | |
| 98,000 | 6 | 118.00 | 9.15 | 2.65 | |
| 130,000 | 11 | 101.55 | 9.68 | 2.81 | |

* = p< .05 ** = p< .01 *** = p< .001

Table 7
Mean Frequencies and Differences
for Three-Year Data on Assaults on Students

| School Type | N | per school Mean | per 100 pupils Mean | SD | Significance of F - ANOVA |
|---|---|---|---|---|---|
| All | 61 | 63.72 | 6.90 | 16.39 | - |
| Junior | 37 | 43.49 | 7.94 | 19.37 | ns |
| Senior | 24 | 94.92 | 5.29 | 10.44 | |
| 6-8 grade | 15 | 1.47 | 0.27 | 0.68 | |
| 7 & 8 grade | 14 | 109.86 | 20.24 | 27.86 | |
| 7-9 grade | 8 | 6.13 | 0.78 | 0.89 | ** |
| 9-12 grade | 21 | 106.10 | 5.89 | 11.06 | |
| 10-12 grade | 3 | 16.67 | 1.04 | 0.60 | |
| Black | 12 | 50.25 | 6.05 | 12.55 | |
| Hispanic | 17 | 52.65 | 6.54 | 15.14 | ** |
| White | 25 | 26.68 | 2.33 | 6.63 | |
| Mixed | 7 | 246.00 | 25.52 | 33.44 | |
| District 1 | 4 | 0.75 | 0.09 | 0.05 | |
| District 2 | 9 | 318.78 | 39.89 | 23.08 | |
| District 3 | 9 | 15.78 | 0.99 | 1.63 | |
| District 4 | 11 | 0.00 | 0.00 | 0.00 | *** |
| District 5 | 5 | 142.00 | 7.39 | 5.46 | |
| District 6 | 6 | 9.83 | 1.02 | 0.86 | |
| District 7 | 6 | 0.83 | 0.34 | 0.07 | |
| District 8 | 11 | 9.00 | 0.85 | 0.80 | |
| Size of District | | | | | |
| <10 schools | 4 | 0.75 | 0.04 | 0.05 | |
| 10-25 schools | 17 | 45.53 | 2.55 | 4.27 | ns |
| >25 schools | 40 | 77.75 | 9.43 | 19.66 | |
| Low SES | 37 | 96.08 | 10.32 | 19.81 | |
| Medium SES | 18 | 18.39 | 2.16 | 7.17 | ns |
| High SES | 6 | 0.17 | 0.01 | 0.02 | |
| Community Size | | | | | |
| 30,000 people | 5 | 142.00 | 7.39 | 5.46 | |
| 50,000 | 15 | 13.40 | 1.00 | 1.34 | |
| 80,000 | 11 | 9.00 | 0.85 | 0.80 | *** |
| 90,000 | 13 | 220.92 | 27.63 | 26.86 | |
| 98,000 | 6 | 0.83 | 0.34 | 0.07 | |
| 130,000 | 11 | 0.00 | 0.00 | 0.00 | |

* = p< .05 ** = p< .01 *** = p< .001